



3 NUTRITION SERVICES

Effective: 12/1/95

3.51 Maintenance of Nutrition Assessment Equipment

Revised: 10/15/98

POLICY: All assessment equipment must be properly maintained. Local WIC Projects are responsible for maintenance, repair costs, and replacement of equipment. The following maintenance information has been compiled from product handbooks and personal communications with company representatives. If newer recommendations are published by the manufacturers, use those.

PROCEDURE:

A. CHECKING THE ACCURACY OF SCALES

1. Scales must be periodically tested for accuracy. Portable scales should be tested every 1-2 months and non-portable scales every 6 months. Portable scales that are never moved should be tested at least every six months. The Project must have a policy regarding frequency of testing.
2. Test infant scales at 5, 10, 20, and 30 pounds. Test adult scales at 50, 100, and 150 pounds. The reading should be within 2% of the test weights; if not, contact a scale service company for servicing. Keep a log of dates scales are tested (with staff initials) and the results (e.g., within normal limits). See Attachments.
3. Use a set of weights to test the scales. If the project does not have a set of weights:
 - a) Contact a city sealer or the State Field Weights and Measures. While their primary responsibility is to check the accuracy of weights and measures used in commercial business (e.g., grocery stores, gasoline pumps, etc.), they may be able to schedule visits to WIC.
 - b) Contact a scale service company. There will be a fee.
4. An annual servicing by a scale service company is recommended. A scale service company should clean the interior, test "shifting" - to see if the weight registers the same when test weights are put on different places on the scale platform, check zeroing, and make minor adjustments.

B. CHECKING THE ACCURACY OF CENTRIFUGES

1. Send the centrifuge to an authorized dealer for an inspection (e.g., of electrical safety, brushes, cushions, rpm's, etc.) semi-annually if the centrifuge is used three or more days per week, or annually if used less.



2. Check the timer monthly: Turn timer past five minutes; turn dial back to one minute. When the dial hits the one-minute mark, begin a stopwatch or an electric clock with a second hand. Simultaneously, the stopwatch should reach one minute when the bell in the centrifuge rings.
3. Check the maximum packing monthly: Fill two microhematocrit tubes with blood. Centrifuge the recommended time; record results. Centrifuge the tubes for an additional minute; record the results. Compare the results of these two readings. If the results differ, replace the brushes (see directions in the operator's manual). Repeat the test. If the results still differ, the centrifuge needs servicing.
4. Listen to the pitch of the noise daily (when in use). If the pitch changes, the brushes may be wearing out and should be replaced.
5. See the sample six-month "Centrifuge Testing Sheet" (Attachment) for recording testing results.

C. CHECKING THE ACCURACY OF THE HEMOCUE

The following information is from product manufacturer publications and personal communications.

1. Perform quality control on a daily basis.
 - a) Each HemoCue has its own Red Control Cuvette. The serial number is printed on the back of the HemoCue just above the power inlet, on the front of the control cuvette container, and on the carton the photometer is packed in.
 - b) Pull out the holder to the insertion position. This is noted by a district stop which should not be exceeded. The display shows the letters "Hb."
 - c) After 5-6 seconds, the text "READY" appears on the display and three dashes start to blink. This means the photometer is ready for measurement.
 - d) Put the red control cuvette into the holder and push it in to the measuring position. The display now shows "MEASURING" plus three fixed dashes.
 - e) After 10-15 seconds, the value for the control cuvette will appear on the display screen.
 - f) Compare this reading with the value given on the control cuvette reading card (carried inside the control cuvette container). There should not be a deviation of more than ± 0.3 g/dl.
 - g) Record results on the Daily Quality Control Record (see Attachment).



2. Assure proper care of the microcuvettes.
 - a) Microcuvettes are packaged in containers of 50 each. Each container has a batch number and expiration date printed on the label. Record these on the HemoCue Daily Quality Control Record (see Attachment). The microcuvettes are stable up to the expiration date (two years from the date of manufacture) as long as the container is sealed.
 - b) Once the container is opened, the microcuvettes are stable for 90 days. Record date opened in the appropriate space on the container label and on the Daily Control Record each day of use. Do not remove the desiccant package from the container as this prevents moisture and humidity from damaging the microcuvettes. In addition, do not refrigerate as condensation will form within the container when moved from cold to warm temperatures.
 - c) To prevent spoilage of microcuvettes, keep the lid snapped on tightly throughout the day, removing only the number of microcuvettes needed for immediate testing. When traveling, keep the microcuvettes and HemoCue in the car as opposed to in the trunk (or in the house if overnight storage is needed).
3. Assure proper clean up and repacking of HemoCue after use.
 - a) At the end of each day of operation, remove the cuvette holder completely from the photometer and clean thoroughly with a mild cleaner and hot water or alcohol. Rinse thoroughly with water and dry completely.
 - b) To clean the HemoCue:
 - (1) Moisten a cotton swab with water and squeeze out the excess moisture.
 - (2) With the black slide holder removed, insert the cotton swab 2 inches into the black slide holder opening. Keeping pressure towards the roof, you should feel a slight ridge or indentation. This is the sensor window.
 - (3) Clean a 1 square inch area around the ridge. Repeat until a Q-tip is removed with no blood residue on it.
 - (4) With a dry Q-tip, swab the area just cleaned until dry.
 - (5) Check the operation of the HemoCue using the control cuvette.
 - c) Make sure that the holder is completely dry before replacing it in the photometer.



- d) Repack the photometer in the styrofoam tray and carton. Make sure that the serial numbers match for the photometer, the red control cuvette, and the carton. If the HemoCue is to be battery-operated the next day, upon arrival back at the main office, plug the photometer into a power source so that it will be fully charged and ready for the next day's use.

D. REPAIR COSTS

If the repair cost is greater than one third of the original cost, the recommendation is to buy new equipment.

ATTACHMENTS:

- * Sample centrifuge timer sheet
- * Infant Scale Quality Control Record
- * Adult Scale Quality Control Record
- * HemoCue Daily Quality Control Record